

KURUKSHETRA UNIVERSITY, KURUKSHETRA

Subject: B.Ed. (Spl. Edu.) Scheme for the session 2013-14 and onwards based on Rehabilitation Council of India's Syllabus.

PART- A	Theory Papers	Max Marks = 900+300+300=1500	
		Int. Marks	Ext. Marks
Paper-I	Nature and Needs of Various Disabilities -An Introduction	25	75
Paper- II	Education in India: A Global Perspective	25	75
Paper – III	Educational Psychology and Persons with Disabilities	25	75
Paper – IV	Educational Management, Curriculum Designing and Research	25	75
Paper –V	Introduction to Visual Impairment	25	75
Paper – VI	Educational Perspective of Visual Impairment	25	75
Paper VII	Learning Methods and Strategies for Teaching Children with Visual Impairment	25	75
Paper VIII & IX	Methodology of Teaching any two of the following papers with special emphasis on Instructional methods, curriculum development and evaluation.	25+25	75+75
Group A	(i) Teaching of English to Visually Impaired Children. (ii) Teaching of Hindi to Visually Impaired Children.		
Group – B	(i) Teaching of Social Studies to Visually Impaired Children. (ii) Teaching of Mathematics to Visually Impaired Children.		
Group- C	(i) Teaching of Science to Visually Impaired Children.		

Note: The Candidate shall choose any two teaching subjects from any two groups selecting one subject from one group. One of the subjects selected from these papers shall be the same as offered for the degree course.

PART-B Practicals (Max Marks = 300)

Int. Marks	Extr. Marks
75	225
(75+225=300)	

PART-B

Paper – X	(i)	Braille	25	75
	(ii)	Orientation and Mobility	10	30
	(iii)	Daily Living Skills and Sensory Training	10	30
	(iv)	Use of Aids, Appliances and Vision Screening Tests.	15	45
	(v)	Teaching Aids	05	15
	(vi)	Case Study	10	30

PART-C

Paper XI Teaching Practice in a Special School/Integrated School. (40+40) (110+110)

Note : 1 Each candidate will deliver

- (a) Two discussion lessons (one each in subjects offered in papers VIII & IX)
- (b) 15 lessons in each subject under regular supervision by the concerned teacher during a 4 week teaching practice in any institution for visually impaired children/integrated setting.

2. (a) In theory subjects from Paper I to IX, the internal assessment will be based on one house examination and one assignment in each paper.

(b) In practical (Paper X) the internal assessment will be based on one house examination.

(C) In teaching practice, the internal assessment will be based on discussion lessons and performance in the last five lessons in each subject.

3. The skill in teaching examination will be evaluated in two teaching subjects by a set of three examiners. Two external examiners and one internal teacher from special education unit will form the team of examiners to assess the candidates for (110+110) marks in each paper.

PAPER I: NATURE AND NEEDS OF VARIOUS DISABILITIES – AN INTRODUCTION

TIME: 3 HOURS

MAX MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives

After studying this paper, the student teachers are expected to realize the following objectives:

1. Differentiate between Blindness and Low Vision and also describe their causes and behavioral characteristics.
2. Explain Hearing Impairment along with its causes and educational programmes.
3. Differentiate between Mental Retardation and Mental Illness.
4. Explain about Locomotor impairment, Neurological disorder and Leprosy.
5. Explain the concept of learning disability, its types, identification and educational programmes.
6. Explain the concept of Multiple disabilities along with their educational programmes.
7. Explain autism spectrum disorder, its identification, causes and educational programmes.

COURSE CONTENTS

Unit 1: Blindness and Low vision

- 1.1 Definition and Identification
- 1.2 Incidence and Prevalence
- 1.3 Characteristics
- 1.4. Causes and Prevention
- 1.5. Intervention and Educational Programmes

Unit 2: Hearing Impairment

- 2.1 Definition and Identification
- 2.2 Incidence and Prevalence
- 2.3 Causes and Prevention
- 2.4 Types of Hearing loss and Characteristics
- 2.5 Intervention, Communication Approaches and Educational Programmes

Unit 3: Mental Retardation

- 3.1 Definition and Identification of Mental Retardation and Mental Illness
- 3.2 Incidence and Prevalence, Causes and Prevention
- 3.3 Characteristics –Mild, Moderate, Severe, Profound
- 3.4 Types and Classification of Mental Retardation and Mental Illness
- 3.5 Intervention and Educational Programmes

Unit 4: Leprosy Cured, Neurological and Locomotor Disabilities

- 4.1. Definition and Classification
- 4.2. Incidence and Prevalence
- 4.3. Cause and Prevention
- 4.4. Types, Classification and Characteristics
- 4.5. Intervention and Educational Programmes

Unit 5: Learning Disabilities, Autism Spectrum Disorders and Multiple Disabilities

- 5.1. Concept, Definition and Identification of Learning Disabilities, Autism Spectrum Disorders and Multiple Disabilities such as Deaf Blindness and Slow learner/MR Blindness
- 5.2. Incidence and Prevalence
- 5.3. Causes and Prevention
- 5.4. Types and Characteristics
- 5.5. Intervention and Educational Programmes.

Suggested Readings

- Baine, D. (1988). *Handicapped children in developing countries assessment, curriculum and construction*. Alberta: University of Alberta
- Berdine, W. H., & Blackhurst, A.K. (1985). *An introduction to special education*. Boston: Harper & Collins
- Byrne, M. & Shervanian, C. (1977). *Introduction to communicative disorder*. New York: Harper & Row.
- Evans, P. & Verma, V. (Eds.) (1990). *Special education. past present and future*. Boston: The Falmer Press.
- Fernandez, G., Koenig, C., Mani, M.N. G., & Tesni, S. (1999). *See with the blind: Trends in education of the visually impaired*. Bangalore: CBM and Books for Change
- Gearheart, B.R., Ruitter, J.A., & Sileo, T.W. (1988). *Teaching mildly and moderately handicapped students*. New Delhi: Prentice Hall of India
- Hallahan D. P., & Kauffman, J. M. (2000). *Exceptional learners: An introduction to special education*. Boston: Allyn & Bacon
- Harely, R.K. & Lawrence, G.A. (1977). *Visual impairment in the school*. Springfield. IL: Charles C. Thomas
- Hewett, F.M., & Forness, S.R. (1984). *Education of exceptional learner*. MA: Allyn & Bacon
- Jangira, N.K. & Mani, M.N.G. (1991). *Integrated education of the visually handicapped: management perspectives*. Gurgaon: Academic Press

- Kirk, S. A., & Gallagher, J.J. (2000). *Education of exceptional children*. Boston: Houghton Mifflin
- Longone, B. (1990). *Teaching retarded learners: curriculum and methods for improving instruction*. Allyn and Bacon: Boston.
- Loreman, T., Deppler, J., & Harvey, D. (2005). *Inclusive education: A practical guide to supporting diversity in the classroom*. NY: Routededge Falmer
- Mani, M.N. G. (1992). *Technique of teaching blind children*. New Delhi: Sterling Publishers
- Muricken, Jose S.J. & Kareparampil, G (1995). *Persons with disabilities in society*, Trivandrum: Kerala Federation of the Blind.
- Narayan & Kutty, A.T.T. (1989). *Handbook for Trainers of the mentally retarded persons. Pre-primary level*. Secunderabad: NIMH
- Peshwaria, R. & Venkatesan (1992). *Behaviourally retarded children: A manual for Teachers*. Secunderabad: NIMH
- Rao, I., Prahladrao,S., & Pramod, V. (2010). *Moving away from labels*. Bangalore: CBR network (South Asia)
- Overton, T. (1992). *Assessment in special education: An applied approach*. New York: McMillan.
- Panda, K.C. (1997). *Education of exceptional children*. New Delhi: Vikas Publications.
- Singh, J. P., & Dash , M. K. (2005). *Disability development in India*. New Delhi: RCI
- Subba Rao, T.A. (1992). *Manual on developing communication Skills in mentally retarded persons*. Secunderabad: NIMH.
- Taylor, R.L. (1993). *Assessment of exceptional students educational and psychological procedure*. Boston: Allyn and Bacon.
- Van Riper, C.A. & Emerick. L. (1990). *Speech correction-An introduction to speech pathology and Audiology*. New Delhi: Prentice Hall.
- WHO (1980). *International classification of impairments, Disabilities and handicaps*. Geneva: WHO
- WHO (2001). *ICF: International classification of functioning, disability and health*. Geneva: WHO

PAPER – II: EDUCATION IN INDIA: A GLOBAL PERSPECTIVE

TIME: 3 HOURS

MAX MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

1. Explain the nature, process and philosophy of education.
2. Spell out the aims and functions of education in general and special education in particular.
3. Describe the various systems of education with reference to general and special education
4. Discuss the various roles of educational agencies in India.
5. Analyse the role of educational system in the context of Modern Ethos like democracy, socialism and secularism.

COURSE CONTENTS

Unit 1: Nature, Process and Philosophy of Education

- 1.1 Its Conceptual development – the delineation of its meaning as in traditional and modern times.
- 1.2 Nature and philosophy of Idealism, Naturalism, Pragmatism, Humanism and Constructivism.
- 1.3 Nature and Philosophy of Special Education.
- 1.4 Educational Implications of Idealism, Naturalism, Pragmatism, Humanism and Constructivism in Special Education.
- 1.5 Role of teacher in the evolutionary processes of education.

Unit 2: Educational Aims

- 2.1 Aims and functions of education.
- 2.2 Aims, objectives and functions of special education.
- 2.3 Direction and priorities of general and special education.
- 2.4 Recent trends in Modern Indian Education including special education.
- 2.5 Education for All movement, Education through 21st century, UNCRPD and Biwako Millennium Frame-work & their educational implications.

Unit 3: Education in the Societal Context

- 3.1 Formal, Informal and Non-formal Education.
- 3.2 Continuing and Life Long Education.
- 3.3 Community Based Education.
- 3.4 Open Learning, Distance Education with reference to General and Special Education.
- 3.5 Value – Oriented Education.

Unit 4: Educational Agencies for National Development

- 4.1 Educational Challenges for economic and socio-political development.
- 4.2 Role of home, school, society and mass media
- 4.3 Role of Governmental and Non-Governmental agencies in general and special education. Example- NCERT, SCERT, RCI, NCTE and National Institutes for the Handicapped and International Non-Governmental Organizations (INGOs) like UNICEF, UNESCO, Action Aid and CBM.
- 4.4 Resource mobilization through funding agencies and concessions/ facilities for the disabled.
- 4.5 Govt. Acts, Policies and Schemes such as RCI Act,1992; PWD Act, 1995; National Trust Act, 1999; NPE, 1986; POA, 1992; National Policy for PWD, 2006; SSA, 2002; RAMSA and IEDSS schemes.

Unit 5: Education and the Modern Ethos

- 5.1 Democracy, Socialism and Secularism.
- 5.2 Constitutional provisions in human rights; Inclusive Education- A rights based model
- 5.3 Equalization of educational opportunities.
- 5.4 Education and human resource development.
- 5.5 Planning and Management of Human Resource Development.

Suggested Readings

- Aggarwal, J.C. (1992). *Development and planning of modern education*. New Delhi: Vikas Publication House Pvt. Ltd.
- Anand. (1993). *The teacher & education in emerging Indian society*. New Delhi: NCERT.
- Bha, B.D. (1996). *Educational documents in India*. New Delhi: Arya Book Depot.
- Bhatia, K. & Bhatia, B. (1997). *The philosophical and sociological foundations*. New Delhi: Doaba House.
- Biswas, A. & Aggarwal, J.C. (1992). *Education in India*. New Delhi: Arya Book Depot.
- Biswas, A. (1992). *Education in India*. New Delhi: Arya Book Depot.
- Choudhary, K.C. & Sachdeva, J.L. (Eds.). (1995). *Total literacy by 2000*. New Delhi: IAE Association.
- Fosnot, C.T. (Ed.).(1996). *Constructivism: Theory, perspective and practice*. New York: Teachers College Press.
- Leslie, P.S. & Jerry. G. (2012). *Constructivism in education*. NY: Taylor & Francis.
- Mathur, S.S. (2000). *A sociological approach to Indian education*. Agra: Vinod Pustak Mandir.
- Mohanty, J. (1993). *Indian education in the emerging society*. New Delhi: Sterling Publishers Pvt. Ltd.
- Pathak, R.P. (2009). *Philosophical and sociological foundations of education*. New Delhi: Kanishka Publishers.
- Sapra, C.L. & Asha, Aggarwal. (Ed). (1987). *Education in India: Some critical issues*. New Delhi: National Book Organisation.
- Saraswathi, T.S. (1999). *Culture, socialisation and human development*. New Delhi: Sage Publications.
- Steven, B. (1998). *School and society*. New Delhi: Sage Publications.
- Taneja, V.R. (1998). *Educational thoughts and practice*. Delhi: University Publications.
- Weber, O.C. (1990). *Basic philosophies of education*. New York: Holt, Rinehart and Winston.

PAPER –III EDUCATIONAL PSYCHOLOGY AND PERSONS WITH DISABILITIES

TIME: 3 HOURS

MAX MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

1. Describe the meaning, Nature & Scope of Educational Psychology.
2. Discuss the concepts and principles of growth and development.
3. Describe the various theories of learning and their implications to the PWDs.
4. Explain the concepts of intelligence and aptitude in general and with specific reference to the PWDs.
5. Spell out the meaning and concept of personality and its implications to the PWDs.
6. Define the meaning and techniques of guidance and counselling in general and with special reference to the PWDs.

COURSE CONTENTS

Unit 1: Introduction to Psychology: Educational & Developmental

- 1.1 Meaning, nature and scope of psychology
- 1.2 Nature & scope of Educational Psychology; Role of Educational Psychology in Special Education.
- 1.3 Concept and Principles of Growth and Development, influences of heredity and environment on growth and development.
- 1.4 Developmental needs from infancy through adolescence.
- 1.5 Implications of Developmental delays and deviancies.

Unit 2 Learning

- 2.1 Definition, Meaning of Learning and Concept formation.
- 2.2 Learning -Domains and factors affecting learning.
- 2.3 Theories of learning: Thorndike's Trial and Error Theory of Learning, Theory of Classical Conditioning and Learning by insight & their application to Special Education.

- 2.4 Remembering, forgetting and transfer of learning.
- 2.5 Implications of the above with regard to various disabilities.

Unit 3: Intelligence. Aptitude and Creativity.

- 3.1 Meaning and definitions of intelligence, aptitude.
- 3.2 Theories of intelligence:
- 3.3 Introduction to Psychological Testing objectives, principles and test of aptitude, intelligence & creativity. (DAT/BLAT, SFB, DMT, WISC-R, CPM/SPM, DST)
- 3.4 Creativity: Concept & Process, Characteristics of Creative Children and Teachers' role in Stimulating Creativity.
- 3.5 Implications of the above with regard to various disabilities.

Unit 4: Personality Development

- 4.1 Meaning and concept of personality.
- 4.2 Theories of personality : Type and Trait
- 4.3 Assessment of Personality.
- 4.4 Frustration and conflict, Defence mechanisms and behaviour deviations.
- 4.5 Implications of the above with regard to the disabled.

Unit 5: Guidance and Counselling

- 5.1 Nature, Meaning and Scope of guidance and Counselling.
- 5.2 Role of Home and School in guidance and Counselling.
- 5.3. Techniques of guidance and counselling with reference to the disabled.
- 5.4 Vocational Guidance – assessment, training and avenues.
- 5.5 Individual problems and stress management through Counselling and yoga.

Suggested Readings

- Adams, J.A. (1992) *Learning and memory: An introduction*. Homewood: Illinois Dorsey Press.
- Barclay, J. R. (1993) *Counselling and philosophy*. San Francisco
- Brody, E.B. & Brody, N. (1996). *Intelligence: nature, determinants and consequences*. New York: Academic Press.
- Butcher, H.J. (1993) *Human Intelligence: Its Nature and Assessment*. London: Methuen.

- Gottfried, A.W. (1995). *Home environment and early cognitive development*. San Francisco:
- Guilford, J.B. (1996) *Fields of psychology*. New York: Van Nostrand.
- Hunter, Ian, M.R. (1994) *Memory*, London: Penguin Books.
- Jones, A. P. (1994). *Principles of guidance*. New York :Holt
- Keller, F.S. (1997). *The definitions of psychology*. New York: Appleton Century.
- Munn, N.L. (1997). *Introduction to psychology*, Delhi.
- Petri, H.L. (1995) *Motivation: theory and research*, Belmont: Ca: cawadsworth.
- Sawrey, J.H. & Telford. C. (1998) *Educational psychology* (2nd ed.). New Delhi: Prentice Hall of India.
- Skinner, B F. (1997). *Verbal behaviour*. New York: Appleton Century Crofts
- Smith, M D. (1998). *Educational psychology*. New York: Allyn & Bacon
- Travers, R. M. (1993). *Educational psycholog.*, New York: Mac Millan
- Traxler, A. I. (1990). *Techniques of guidance*. New Delhi: Prentice Hall of India
- Watson, J. B. (1993). *Psychology as a behaviourist views it*. Psycho.Rev., vol.20
- Woodworth, R.S. (1994). *Experimental psychology*. New York: Holt

PAPER: IV EDUCATIONAL MANAGEMENT, CURRICULUM DESIGNING AND RESEARCH

TIME: 3 HOURS

MAXIMUM MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

- 1 Discuss the meaning ,need and scope of educational management
- 2 Define the concept and meaning of curriculum and instructional strategies
- 3 Explain the concept, meaning, scope and types of educational technology
- 4 Describe the need and scope of educational research
- 5 Discuss the meaning ,scope and types of educational evaluation

COURSE CONTENTS

Unit-1: Educational Management

- 1.1 Meaning ,need, scope of Educational Management
- 1.2 Concept and principles of Institutional Planning and management, Admissions with focus on zero rejection, School Plant classification.
- 1.3 Inspection and supervision
- 1.4 Institutional Organisation, Administration and evaluation
- 1.5 Types of Leadership and organizational climate

Unit-2: Curriculum and Instructional Strategies

- 2.1 Concept and meaning of curriculum; Principles of curriculum development
- 2.2 Curriculum Planning, curriculum implementation and curriculum evaluation-implications for disabilities
- 2.3 Theories of instruction- Bruner and Gagne
- 2.4 Instructional approaches and analyzing teacher behaviour
- 2.5 Organizing individual peer, small group and large group instructions

Unit-3: Educational Technology

- 3.1 Concept, meaning and scope of educational technology
- 3.2 Role and types of audio visual aids in teaching
- 3.3 Individualized Instruction and application of media in teaching and learning
- 3.4 Programmed Instruction, Computer Assisted Instruction and Interactive Learning.
- 3.5 Educational Technology for the Disabled.

Unit -4: Need and scope of educational research.

- 4.1 Need and scope of educational research.
- 4.2 Principles of Research in Education.
- 4.3 Types of research – Fundamental, applied and action.
- 4.4 Problems faced in educational research, sources of research problems.
- 4.5 Overview of researches in special education.

Unit 5: Educational Evaluation

- 5.1 Meaning, Scope and Types of evaluation.
- 5.2 Various types of tests.
- 5.3 Characteristics of a good test and construction of test items CRT, NRT, Teacher Made Tests.
- 5.4 Descriptive statistics- Measures of central tendencies (Mean, Median, Mode) ,Variance(Standard Deviation, Quartile Deviations)
- 5.5 Inferential Statistics- Correlation, rank correlation, Construction of different graphs and diagrams.

Suggested Readings

- Aggarwal, Y.P. (1992). *Research in emerging fields of education concepts: trends and prospects*. New Delhi: Sterling Publishers.
- Aggarwal, Y.P. (1994). *Better sampling*. New Delhi: Sterling Publishers
- Anand, S.P. (1996). *RCEB Tools for secondary class students*. Bhubaneswar: Shovan
- Belok, Michael. V. (1993). *Naturalistic research paradigms*. Meerut: Anu Books.
- Buch, M.B. (1991). *Fourth survey of research in education Vol-I and II*, New Delhi: NCERT.
- Cima M Yeole. (1991). *Educational technology*. Cima Myeole.
- D.ES (1982). *Handicapped pupil and special school. regulations*. London: HMSO
- Dipika, Bhadrash S. (1991). *Educational technology for developing teaching competence*: Gavendra Prakashan.
- Evans, P. & Verma. V. (1990). *Special education: past, present and future*. London: The Falmer Press.
- Govt. of India, Persons with Disability Act, 1995.
- Jaganath M.. (1998). *Studies in educational broadcasting. San subscription agency*.
- Mangal S.K. (1990). *Fundamentals of educational technology* : Parkash Brothers
- Martyn, Hammersley. (1996). *Case studies in class room research*. Philadelphia: Open University Press.
- Ruhela Satyapal. (1991). *Education technology. A systematic Text Book*: Associated Publishers: Madras.
- Shukla, S.P. (1996). *Elements of educational research*. Bombay: Allied Publishers (P) Ltd.
- Sharma, S.R. & Vohra,A.L. (1993). *Encyclopedia of educational technology*. Anmol Publications: New Delhi.
- Chand, T. (1992). *Educational technology*: Anmol Publication: New Delhi
- Young, Pauline V. (1992). *Scientific social surveys and research*. Bombay: Asia Publishing Houses.
- Zirpoli, T.J. & Mellor, K.J. (1993) *Behaviour management, application for teachers and parents*. Toronto: Maxwell Mcmillan.

PAPER –V: INTRODUCTION TO VISUAL IMPAIRMENT

TIME: 3 HOURS

MAX MARKS:100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives-

1. Explain the functioning of the eye and measures for eye care.
2. Describe eye disease and refractive errors
3. Explain the concept of Impairment, Disability and Handicap as defined by ICIDH - 1980 and ICF-2002
4. Define Psycho-social implications of blindness
5. Describe the impact of visual impairment on the personality development of the child.
6. Explain Parental and Societal attitudes and their impact on adjustment and personality development of children with visual impairment.
7. Describe the nature of visually impaired children with associated disabilities.

COURSE CONTENTS

Unit I: Anatomy and Physiology of the Eye

- 1.1 Eye and Eye care
- 1.2 Visual Acuity, Refraction, Fusion, and Depth Perception
- 1.3 Visual deficit – tunnel vision, loss of visual field, central scotoma, low vision.
- 1.4 Refractive errors- Myopia, Hyperopia, Presbyopia and Astigmatism
- 1.5 Common eye diseases – Cataract, Glaucoma, Trachoma, Corneal ulcer, Xerophthalmia, Retinitis pigmentosa, Macular degeneration, and Optic atrophy

Unit II: Nature of Visual Impairment

- 2.1 Concept of Impairment, Disability and Handicap
- 2.2. WHO classification: ICIDH 1980 and ICF 2002
- 2.3 Definition and classification of Blindness and Low Vision

- 2.4 Incidence and prevalence of Visual Impairment in India
- 2.5 NSSO and Census role in prevalence data since 1980 till present.

Unit III: Psycho-Social Implications of Visual Impairment

- 3.1 Psychological Implications of blindness
- 3.2 Sociological implications of blindness
- 3.3 Effects of blindness on Growth and Development - Physical and Social
- 3.4 Effects of blindness on Intellectual and Emotional Development
- 3.5 Effects of blindness on personality development, Verbalism, and Mannerism

Unit IV: Social Disposition to Visual Impairment

- 4.1 Concept of Attitude and its components
- 4.2 Stereo typic attitudes towards visual disability
- 4.3 Parental and Siblings attitudes towards visual disability and their impact on adjustment
- 4.4 Societal attitudes towards disability and attitudes of self towards visual disability
- 4.5 Attitude Modification and Role of teacher in developing positive attitude

Unit V: Visually Impaired Children with Associated Disabilities

- 5.1 Concept
- 5.2 Types of additional disabilities with blindness – hearing impairment, mental retardation, locomotor and neurological disorders, learning disabilities.
- 5.3 Assessment
- 5.4. Educational implications and early Intervention.
- 5.5 Support Services – modality and implications.

Suggested Readings

- Barraga, N.C. (1976). *Visual handicaps and learning – A developmental approach*. California: Wordsworth.
- Corn, A.L. & Koenig A.J. (1996). *Foundation of low vision: Clinical & functional perspective*. New York: AFB.
- Faye, E.E., (Ed.). (1984). *Clinical low vision*. Boston: Little Brown and Co.
- Jose, R. (1983). *Understanding low vision*. New York: AFB.
- Keefee, J.E. (1994). *Assessment of low vision in developing countries*. Book 1. Melbourne: The University of Melbourne

- Lowenfeld, B.(1974). *The visually handicapped child in school*. London: Constable & Company Ltd.
- Mani, M.N.G. (1992). *Concept development of blind children*. Coimbatore: Sri Ramakrishna Vidyalaya Printing Press.
- Mani, M.N.G. (1992). *Techniques of teaching blind children*. New Delhi: Sterling Publishers.
- Mani, M.N.G. (1992). *Ingredients of IED*. Mukkimalai: Nivis Publishers.
- Mani, M.N.G. (1995). *Reading preference test to children with limited vision*. Coimbatore: S.R.K.V. College of Education.
- Mittal, S.R. (Ed.). (2004). *Shikshak prashikshan lekhmala*. Delhi: AICB.
- Mittal, A. K. & Mittal, S. R. (2012). (Eds). *Drashtibadha shikshan*. Delhi: AICB.
- Moores, D.F. (1982): *Educating the deaf: Psychology, principles and practices* (2nd Ed.) Boston: Houghton Mifflin.
- Muricken, Jose S.J. & Kareparampil, G. (1995). *Persons with disabilities in society*. Trivandrum: Kerala Federation of the Blind.
- Pandey, R.S. & Advani, L. (1995). *Perspectives in disability and rehabilitation*. New Delhi: Vikas Publishing House.
- Punani, B. & Rawal, N. (1997). *Community based rehabilitation (visually impaired)*. Bombay: NABRAC.
- Tuttle, D. (1984). *Self-esteem and adjusting with blindness*. Springfield: IL Charles C. Thomas.
- UNESCO. (1997). *International consultation on early childhood education and special educational needs*. Paris: UNESCO.
- Warren, D.H. (1984). *Blindness and early childhood development*. NY: AFB
- Warren, D.H. (1994). *Blindness and children: An individual differences approach*. NY: Cambridge University Press.
- WHO. (1992). *Prevention of Blindness*. Geneva: WHO.
- WHO. (1993). *Management of low vision in children*. Geneva: WHO.
- WHO. (1997). *Global initiative for the elimination of avoidable blindness*. Geneva: WHO.
- WHO. (2002). *International classification of functioning disability and health*. Geneva: WHO.
- Ysseldyke, J.E. & Algozzine, B. (1982). *Introduction to special education*. Boston: Houghton Mifflin.

PAPER –VI: EDUCATIONAL PERSPECTIVE OF VISUAL IMPAIRMENT

TIME: 3 HOURS

MAX MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected realize the following objectives:

Objectives:

1. Trace the Historical Perspective of Education of Visually Impaired Children
2. Understand the problems of low vision children and educational provisions for them
3. Describe the concept and issues related to inclusive Education of visually impaired children.
4. Narrate the need and nature of curricular adaptations for visually impaired children
5. Plan educational services leading to rehabilitation of visually impaired children

COURSE CONTENTS

Unit 1 Historical Perspectives of Education of Visually Impaired Children

- 1.1. Historical development in India and Abroad
- 1.2 Cascade system of service delivery.
- 1.3 Models of integrated education: resource model, itinerant model, combined model, cluster model, cooperative model, dual teacher model, multi-skilled teacher model.
- 1.4 Development of inclusive education
- 1.5 Current status of education of visually impaired children with additional disabilities

Unit 2: Education of Low Vision Children

- 2.1 Assessment of low vision.
- 2.2 Educational problems of low vision children.
- 2.3 Vision stimulation and visual efficiency.
- 2.4 Low vision aids -Magnifiers, large print materials, and computers.
- 2.5 Education of low vision children with associated intellectual impairment, hearing impairment and neurological impairment including classification, assessment and teaching strategies.

Unit 3: Development of inclusive education

- 3.1 Concept and importance of inclusive education
- 3.2 Central Scheme of Inclusive Education of children with Disabilities.
- 3.3 Role of functionaries -head masters/principals, special teachers, class room teachers, parents and peers
- 3.4 Factors responsible for successful integration and inclusion.
- 3.5 Importance of SSA and RMSA

Unit 4: Curricular Adaptation

- 4.1 Importance of curricular adaptations
- 4.2 Direct and indirect services, material development and presentation.
- 4.3 General principles of curricular adaptations: duplication, modification, substitution and omission.
- 4.4 Use of adapted instructional material for teaching and learning subjects like maths, science, social science, etc.
- 4.5 Creative arts and adapted physical education activities, yoga, strategies for coping with stress.

Unit 5: Education for Rehabilitation

- 5.1 Pre-requisite skills for the successful rehabilitation of visually impaired persons.
- 5.2 Role of multi-purpose rehabilitation workers and Para-professionals.
- 5.3 Linkages between education and rehabilitation professionals.
- 5.4 Awareness of other development programmes in the community.
- 5.5 Familiarizing with poverty alleviation programmes.

Suggested Readings

- ICEVI (1995). *Reaching the unreached. Asian conference proceedings*. Ahmedabad: Blind People's Association.
- Julka, Anita (1999). *Low vision children – Guide for primary school teachers*. New Delhi: NCERT
- Mani, M.N.G. (1992). *Concept development of blind children*. Coimbatore: Sri Ramakrishna Vidyalaya Printing Press.
- Mani, M.N.G. (1992). *Ingredients of IED*. Mukkimalai: Nivis Publishers.
- Mani, M.N.G. (1992). *Techniques of teaching blind children*. New Delhi: Sterling Publishers.
- Moores, D.F. (1982). *Educating the deaf: psychology, principles and practices* (2nd Ed.) Boston : Houghton Mifflin.
- Muricken, Jose S.J. & Kareparampil, G (1995). *Persons with disabilities in society*. Trivandrum : Kerala Federation of the Blind.
- Pandey, R.S & Advani, Lal (1995). *Perspectives in disability and rehabilitation*. New Delhi: Vikas Publishing House.
- Punani, B. & Rawal, N (1997). *Community based rehabilitation (visually impaired)*. Bombay: NAB RAC.
- Tuttle, D. (1984). *Self-esteem and adjusting with blindness*. Springfield, IL: Charles C. Thomas.

- UNESCO (1997). *International consultation on early childhood education and special educational needs*. Paris: UNESCO
- WHO (1992). *Prevention of blindness*. Geneva: WHO
- Ysseldyke, J.E., & Algozzine, B. (1982). *Introduction to special education*. Boston: Houghton Mifflin.

PAPER VII: LEARNING METHODS AND STRATEGIES FOR TEACHING CHILDREN WITH VISUAL IMPAIRMENT

TIME: 3 HOURS

MAX MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

1. List various approaches to be adopted in teaching visually impaired children.
2. Demonstrate expertise in teaching plus curricular skills to visually impaired children.
3. Demonstrate techniques of teaching language skills to visually impaired children.
4. Demonstrate methods of teaching mathematics to visually impaired children.
5. Demonstrate methods of teaching science and social science to visually impaired children.

COURSE CONTENTS

Unit I: Need for Various Approaches in Teaching Visually Impaired Children

- 1.1 Principles of Imparting Instructions to students with Visual Impairment. .
- 1.2 Learning stages -sensory motor, concrete operation and abstract thinking (logical operations).
- 1.3 Compensatory instructions for concept development and learning.
- 1.4 Pedagogy of Inclusive Education
- 1.5 Learning Styles and Child Centred Teaching

Unit II: Teaching Plus Curriculum Skills

- 2.1 Introduction and techniques of teaching various daily living skills to visually impaired children.
- 2.2 Techniques of teaching of orientation and mobility, importance of orientation and mobility for persons with visual impairment.
- 2.3 Braille - techniques of teaching Braille, reading and writing skills, reading readiness activities.
- 2.4 Knowledge of various aids and appliances.
- 2.5 Sensory training
 - Importance, objectives and procedures.
 - Residual vision-Tactile sense
 - Auditory sense
 - Olfactory sense
 - Kinesthetic sense &
 - Multi-sensory approach

Unit III: Methodology of Teaching Languages

- 3.1 Developing listening skills.
- 3.2 Pre-requisite skills for language development.
- 3.3 Development of vocabulary and comprehension skills
- 3.4 Verbalization of visually impaired children
- 3.5 Evaluation of the language development skills.

Unit IV: Methodology of Teaching Mathematics

- 4.1 Factors contributing to learning mathematics.
- 4.2 Teaching Abstract Concepts to the students with visual impairment.
- 4.3 Use of mathematical devices -abacus, Taylor frame and geometry board.
- 4.4 Mathematical Braille code for India
- 4.5 Evaluation of Learning in Mathematics.

Unit V: Methodology of teaching (a) Science and (b) Social Science

- 5.1 Methods of teaching science to students with visual impairment.
- 5.2 Methods of teaching social science to students with visual impairment.
- 5.3 Preparation and Presentation of tactile diagrams
- 5.4 Presentation and use of different types of maps and globes.
- 5.5 Evaluation of learning in science and social science.

Suggested Readings

- Bigge, J.L. & Stump, C.S. (1999). *Curriculum assessment and instructions*. NY: Woodworth Publishing Company.
- Fernandez, G., Koenig, C., Mani, M.N.G., & Tensi, S. (1999). *See with the blind*. Bangalore: Books for change.
- Holbrook, N.C & Koenig, A.J. (Eds.). (2010). *Foundation of education*. NY: AFB.
- Jangira, N.K. & Mani, M.N.G. (1991). *Integrated education of the visually handicapped: Management perspectives*. Gurgaon: Academic Press.
- Jaekel, R.C. (1993). *Mobility skills for blind people. A guide for use in rural areas*. Germany: Christoffel Blind Mission.
- Lewis, R.B. & Doorlag, D.H. (1987). *Teaching special students in the mainstream*. Ohio: Merrill Publishing Company.
- Lowenfeld, B.(1974). *The visually handicapped child in school*. London: Constable & Company Ltd.
- Mani, M.N.G. (1991). *Braille, instructions for teacher preparation in Tamil Nadu*. Coimbatore: Classic Publications.
- Mani, M.N.G. (1992). *Techniques of teaching blind children*. New Delhi. Sterling Publishers Private Limited.

- Mani, M.N.G. (1997). *Amazing abacus*. Coimbatore: S.R.K. Vidyalaya Colony.
- Mittal, S.R. (Ed.). (2004). *Shikshak prashikshan lekhmala*. Delhi: AICB.
- Muricken, Jose S.J. & Kareparampil, G. (1995). *Persons with disabilities in society*. Trivandrum: Kerala Federation of the Blind.
- Punani, B. & Rawal, N (1993). *Handbook: Visual handicap*. New Delhi: Ashish Publishing House.
- Rex, E.J., Koenig, A.J., Wormsley, D.P. & Baker, R.L. (1995). *Foundation of braille literacy*. NY: AFB.
- Scholl, G.T. (1986). *Foundation of education for blind and visually handicapped and youth: Theory and practice*. NY: AFB.
- Sidhu, K.S. (2006). *The teaching of mathematics*. New Delhi: Sterling publishers Pvt. Ltd.
- Smith, T.E.C., Polloway, E.A., Patton, J.R. & Dowdy, C.A. (1996). *Teaching students with special needs in inclusive setting*. London: Allyn & Bacon.

**PAPER–VIII & IX (Gr. A) (I): TEACHING OF ENGLISH TO
VISUALLY IMPAIRED CHILDREN**

Max Marks: 100
External: 75
Internal: 25
Time: 3 Hours

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

1. Acquire knowledge of the objectives of teaching English
2. Able to develop the basic linguistic skills among their pupils
3. Acquaint themselves with micro-teaching skills for effective teaching in the classroom
4. Able to explain the nature of modification needed in the material and methods for teaching English to Visually Handicapped Children
5. Apply the techniques of evaluation in English Teaching

COURSE CONTENTS

Unit 1: English and School Curriculum

- 1.1 The Role of English in India Today
- 1.2 Nature of English Language.
- 1.3 Principles of Language Learning and Teaching w.r.t. English Language
- 1.4 The aims of Teaching English in Schools
- 1.5 Methods of Teaching English language: Translation method, Bi-lingual method, Direct Method and Structural Approach.

Unit 2: Teaching Linguistic Skills

- 2.1 Meaning, Importance and Process of Reading
- 2.2 Process, Importance and Characteristics of Writing
- 2.3 Teaching Mechanics of Reading and Writing
- 2.4 The Significance of listening & speaking
- 2.5 Listening & speaking skill instruction

Unit 3: Micro Teaching Skills

- 3.1 Skill of Explaining
- 3.2 Skill of Stimulus Variation
- 3.3 Skill of Probing Questions
- 3.4 Skill of Reinforcement
- 3.5 Preparation of Lesson Plan for Teaching of Poetry, Prose, Grammar and Composition

Unit 4: Teaching English to Visually Handicapped

- 4.1 Use of remaining senses for Language Learning and Teaching.
- 4.2 Methods of Teaching Reading and Writing Braille.
- 4.3 Aids of Writing Braille.
- 4.4 Place of Listening Skills in the learning of Language
- 4.5 Utilizing Tape Recorders and Live Readers for Language Learning

Unit 5: Evaluation of Language Skills

- 5.1 Meaning, Nature and Process of Evaluation
- 5.2 Techniques of Evaluation for Listening , Speaking, Reading and Writing skills
- 5.3 Importance and Characteristics of a Good Test
- 5.4 Construction of Test-items for evaluation of students' Linguistic Skills
- 5.5 Common errors in English language and their Removal through Remedial Teaching

Suggested Readings

- Bhatia, K.K. (1972). *Teaching English as a foreign language*. Chandigarh: N.B.S. Educational Publishers.
- Bhatia, K.T. (1986). *The teaching of English in India*. Ludhiana: Parkash Publishers..
- Lado, R. (1964). *Language teaching – A scientific approach*. Bombay: Mc-Graw Hill Publishing Co. Ltd.
- Mukalel, J. & Ahmed, S.B. (1984). *Teaching English in India*. New Delhi: Arya Book Depot.
- Pathak, P.D. (1975). *Teaching of English in India*. Agra: Vinod Pustak Mandir.
- Swrup, S. (Ed.) (1970). *The teaching of English- A scientific approach*. Nabha : Pepsu Publication.
- Wadhwa, S.S. & Shaida A.K. (1973). *Latest trends in English teaching*. Chandigarh: Aggarwal Publishers.

**PAPER-VIII & IX (Gr. A) (II): TEACHING OF HINDI TO VISUALLY
IMPAIRED CHILDREN**

vf/kdre vad%100
ckg; vad%75
vkrfjd vad %25

l e; %3 ?kà/s

uk%ÁR; d bdkbz ea l s, d Á"u púrs gq] dty ikp Á"uka ds mùkj nhft, A l Hkh Á"uka ds vad
l eku gSA

mís; %

bl fo'k; dks i <us ds i "pkr-fo | kFkz & v/; ki dka l s fuEu mís; ka dks Ákr djus dh vi \$kk dh
t krh gS%

1. ÁkFkfed o ek/; fed Lrj ea fglh f"kk.k ds {ks=} egYo] y{;] o mís; ka dk Ákr l kguoÉku
o o.kú djuk A
2. fglh f"kk.k dh fofHku fof/k; ka mi kxeka dh ppkz djuk o i k B ; kstuk r\$ kj djuk A
3. n"Vckf/kr fo | kFkz; ka dks fglh f"kk.k grqfofHku ij d dks kyka ds eglo dh 0; k [; k
djuk A
4. n"Vckf/kr fo | kFkz; ka dh fglh cy ea y[ku] i Bu o f"kk.k ÁfØ; k dks l e>uk A
5. n"Vckf/kr fo | kFkz; ka ds eY; ka du dh vo/kkj .kk o fof/k dks l e>uk rFk 0; k [; k djuk A

bdkbz 1. fglh o Ldy i k B; dē

- 1.1 i k B; dē ea fglh dk egYo o {ks=
- 1.2 ÁkFkfed o ek/; fed Lrj ij fglh f"kk.k ds mís;
- 1.3 fglh i k B; Øe dh vkykpkred foopuk
- 1.4 Hk"kkbz dks ky& Jo.k] okd] i Bu o y[ku

bdkbz 2. fglh f"kk.k fof/k; k

- 2.1 x | f"kk.k
- 2.2 0; kdj .k f"kk.k
- 2.3 dfork f"kk.k
- 2.4 jpuk& dgkuh] i = o fuU/k
- 2.5 l fklr o foLr i k B ; kstuk

bdkb73. nf'Vckf/krk fgluh f'k{k.k

- 3.1 fgluh f'k{k.k eanf'Vckf/krk ds ÁHkko
- 3.2 fgluh Hk'kk fodkl ea vU; KkusUæ; ka dk ; ksnku o egUo
- 3.3 Jo.k dkS'kyka dk egUo o fodkl
- 3.4 fgluh f'k{k.k@vf/kxe eafokku I k/kuka t\$ scay VifjdkMj] /ou; fdr i qrdka dk Á; kx

bdkb74. fgluh iBu o y[ku f'k{k.k

- 4.1 I e>us grqi Bu
- 4.2 vkulln grqi Bu
- 4.3 iBu xfr ea l qkj
- 4.4 ek\$ [kd rFk ek\$ i Bu
- 4.5 cPpka dk y[ku dkS'ky l sifjp;
- 4.6 y[ku xfr ea l qkj
- 4.7 orUh ea l qkj

bdkb7 5. fgluh f'k{k.k eaeW; kdu

- 5.1 eW; kdu& vFk] ÁfØ; k o rdud
- 5.2 Á"ui = fuekzk
- 5.3 nf'Vckf/kr grqeW; kdu eavuphyu

I aH2 I ph

dk\$'kd] t; ukjk; .k- ¼1987½ fgluh f'k{k.k p.Mhx<%gfj; k.kk I kfgR; vdkneh A

eB; w] oh- oh- ¼1973½ , D; ut'h'ku , .M MbyieW vkQ ylost- fi vax gky] A

fl g] fujatu dekj- ¼1973½ ek/; fed fo|ky; ka eafgluh f'k{k.k t; i g%jktLFkku fgluh xBFk vdkneh] A

i k.Ms] jke "kfDr- ¼1999½ fgluh f'k{k.k- vkxjk% foukn i qrd eflnj A

I q[k; k] ds ds fgluh /ofu; k; vLj mudk f'k{k.k- bykgkcn%jkeukjk; .k yky A

I Qk; k] j?kqkFk- ¼2000½ fgluh f'k{k.k fof/k- tkyU/kj% i atkc fdrkc ?kj A

I n] fot; - ¼1991½ fgluh f'k{k.k fof/k; k; yf/k; kuk%VMu i fcyds'ku A

o/kk] o8kÁI kn- fgluh f'k{k.k i) fr] i Vuk%fcgkj fgluh xBFk vdkneh A

pLvu dsuFk- ¼1973½ Mbyifa I dM ylost] fLdyI] F; kjh , .M i fDVI - jSI ebluyh] A

**PAPER – VIII & IX (Gr. B) (I): TEACHING OF SOCIAL STUDIES
TO VISUALLY IMPAIRED CHILDREN**

TIME: 3 HOURS

MAX MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

- 1 Appreciate and explain the nature, scope, aims and objectives of teaching social studies at Primary and Secondary Level.
- 2 Discuss different methods and approaches of teaching Social Studies.
- 3 Prepare a lesson plan and able to explain the nature of curriculum adaptation for visually impaired children.
- 4 Explain the importance and procedure of utilizing community resource for teaching of social studies.
- 5 Understand the techniques of evaluation in teaching of social studies.

COURSE CONTENTS

Unit 1: Social Studies and School Curriculum

- 1.1 Social Studies: its meaning, nature and scope.
- 1.2 Aims and objectives of teaching social studies at Primary school Level.
- 1.3 Aims and objectives of Teaching Social Studies at Secondary School Level.
- 1.4 A critical study of existing syllabi in Social Studies

Unit 2: Methods and Techniques of Teaching Social Studies.

- 2.1 Lecture method and discussion method.
- 2.2 Project Method
- 2.3 Assignment Method
- 2.4 Simulation
- 2.5 Dramatization

Unit 3: Teaching Social Studies to the Visually Impaired

- 3.1 Problems and limitations of the visually impaired in Learning/Teaching Social Studies, especially Geography.
- 3.2 Adaptations in Social Studies Curriculum.
- 3.3 Qualities of a good Social Studies Teacher.
- 3.4 Non-Visual Learning experiences, aids and equipments in the teaching of Social Studies.
- 3.5 Lesson Planning in Social Studies.

Unit 4: Utilisation of Community Resource and Current Events.

- 4.1 Importance of Community resources and current affairs in Social Studies.
- 4.2 Procedures of Utilisation
- 4.3 The museum and exhibition.
- 4.4 The social studies classroom, laboratory and library.

Unit 5: Evaluation in Social Studies:

- 5.1 Stating behavioural objectives in Social Studies.
- 5.2 Techniques of Evaluation.
- 5.3 Designing a good test in Social Studies.
- 5.4 Assessing attitudes and values.

Suggested Readings

- Cllen, T. (1952). *The teacher of social studies, 23rd year book of national council for the social studies*. Mckinely Publishing Company: Philadelphia.
- Jangira, N.K., Mukhopadhyaya, S., Mani, M.N.G. and Ray Choudhary, N (1987). *Source book for training teachers of visually handicapped*. Delhi: NCERT.
- Kochhar, S.K. (1991). *The teaching of social studies*. New Delhi: Sterling Publishers.
- Kochhar, S.K. (1990). *Methods and techniques of teaching*. New Delhi: Sterling Publishers.
- Mani, M.N.G. (1992) *Techniques of teaching blind children*. New Delhi: Sterling Publishers.
- Ministry of Education (1960). *Evaluation in social studies*. New Delhi: Govt. of India.
- Moft, M.P. (1955) *Social studies Instruction*. New York: Prentice Hall.
- NCERT (1973): *Social studies: A draft syllabus for class I to XI*. New Delhi: NCERT
- Richey, R.W. (1952). *Planning for teaching*. New York: McGraw Hill.

Sternz, M.J. & Lewis, R.H. (1990) *Methods in the social studies*. New York: Farrar & Rinehart.

U.S. Office of Education (1953). *How children use the community for learning*. Washington: US Govt. Printing Office.

Wesley, E.B. & Adams, M.A. (1952) *Teaching of social studies in elementary School*. Boston: Heath & Co.

Wesley, E.B. (1950). *Teaching of social studies in high school*. Boston: Heath & Co.

Yajnik, K.S. (1966). *The teaching of social studies in India*. Bombay: Orient Longmans Ltd.

PAPER – VIII & IX (GR. B) (II): TEACHING OF MATHEMATICS TO VISUALLY IMPAIRED CHILDREN

TIME: 3 HOURS

MAX MARKS: 100

EXTERNAL: 75

INTERNAL: 25

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

1. Appreciate and explain the importance, value, aims and objectives of teaching Mathematics at Primary and Secondary Level.
2. Acquaint themselves with different methods of teaching Mathematics.
3. Understand the problem and process of teaching Mathematics to visually impaired children.
4. Acquaint themselves with the concept, principles and procedure of curriculum development and curriculum adaptation.
5. Understand the process of evaluation in Mathematics with reference to visually impaired children.

COURSE CONTENTS

Unit 1: Mathematics and its Importance in School Curriculum

- 1.1 Role of Mathematics in day-to-day life.
- 1.2 Value of Mathematics.
- 1.3 Aims of teaching Mathematics.
- 1.4 Objectives of Mathematics Instruction at Primary and Secondary School Level.

Unit 2: Mathematics Instruction

- 2.1 Inductive and Deductive Method.
- 2.2 Analytic and Synthetic method.
- 2.3 Problem-solving and Heuristic Method.
- 2.4 Project Method.
- 2.5 Role of Drill and Practice in Mathematics.

Unit 3: Mathematics Instruction to the Visually Impaired.

- 3.1 Problem of Learning / Teaching Mathematics with reference to Visually Impaired.
- 3.2 (a) Specific Teaching aids/equipments and their uses- Taylor frame, Abacus, Geometrical aids, models and tactile charts etc.
(b) Preparation of Mathematics teaching aids.
- 3.3 Lesson Planning.
- 3.4 (a) Mental Mathematics
(b) Role of Special and Classroom teachers in Teaching Mathematics to Visually Impaired Children.
- 3.5 Mathematics Braille Codes.

Unit 4: Curriculum Development.

- 4.1 Concept of Curriculum and its objectives.
- 4.2 Principles of Curriculum Development.
- 4.3 Procedures of Curriculum Development.
- 4.4 Adaptations in Mathematics Curriculum for students with visual impairment.

Unit 5: Evaluation

- 5.1 Concept of Evaluation and its Functions.
- 5.2 Behavioural Objectives in Mathematics.
 - (a) Importance
 - (b) Taxonomy
 - (c) Procedure of Writing Behavioural Objectives.
 - (d) Stating teaching objectives in behavioural terms.
- 5.3 Construction of different types of test items for evaluation in Mathematics.
- 5.4 Adaptation in Evaluation for Visually Impaired Children.
- 5.5 Diagnostic Testing and Remediation Procedures.

Suggested Readings

- American Foundation for the Blind. (1983). *Education of blind children*. New York : AFB.
- Bhoodev, S. (1988). *Teaching learning strategies and mathematical creativity*. New Delhi: Mittal Publishers.
- Bishop, Virginia E. (1971). *Teaching the visually limited children*. Illinois: Charles C Thomas Publisher.
- Fletcher, R.C. (1973). *Teaching of science and mathematics to the blind*. Worcester :Worcester College for the Blind.
- Gakhar, S.C. (1992). *Teaching of mathematics*. Chandigarh: NM Publishers.
- Gupta, V.K. (1995). *Reading in science and mathematics education*. Ambala: The Associated Publishers.
- Hanninen, K.A. (1975). *Teaching of visually handicapped*. Ohio: Charles E. Merrill Publishing Company
- Holbrook, N.C. & Koenig, A.J. (2005). *Foundations of education*. (2nd edition). NY: AFB.
- Holbrook, N.C & Koenig, A.J. (Eds.). (2010). *Foundations of education*. NY: AFB.
- Lowenfeld, B. (1974). *The visually handicapped child in school*. London: Constable & Company Ltd.
- Mittal, S.R. (Ed.). (2004). *Shikshak prashikshan lekhmala*. Delhi: AICB.
- Mukhopadhyaya, S., Jangira, N.K., Mani, M.N.G., & Ray, C. N. (1987). *Sourcebook for training teacher of visually handicapped*. Delhi: NCERT.
- National Institute for the Visually Handicapped. (1992). *Handbook for the teacher of the visually handicapped*. Dehradun: NIVH.
- Nemeth, A. (1973). *Nemeth code for mathematics and scientific notation*. Loviseville K: American Printing House.
- Scholl, G.T. (1986). *Foundation of education for blind and visually handicapped and youth: Theory and practice*. NY: AFB.
- Sidhu, K.S. (2006). *The teaching of mathematics*. New Delhi: Sterling publishers Pvt. Ltd.

**PAPER – VIII & IX (GR. C): TEACHING OF SCIENCE TO VISUALLY IMPAIRED
CHILDREN**

TIME: 3 HOURS

**MAX MARKS: 100
EXTERNAL: 75
INTERNAL: 25**

Note: The students are required to attempt five questions selecting one question from each unit. All questions carry equal marks.

Objectives:

After studying this paper, the student-teachers are expected to realize the following objectives:

1. Appreciate and explain the importance, value, aims and objectives of teaching Science at Primary and Secondary Level.
2. Acquaint themselves with different methods of teaching Science.
3. Understand the problem and process of teaching Science to visually impaired children.
4. Acquaint themselves with the concept, principles and procedure of curriculum development and curriculum adaptation.
5. Understand the process of evaluation in Science with reference to visually impaired children.

COURSE CONTENTS

Unit 1: Science in school curriculum

- 1.1 Importance of Science in day-to-day life.
- 1.2 Value of Science.
- 1.3 Aims of teaching Science at Primary and Secondary Level.
- 1.4 Stating Objectives of Teaching Science at Primary and Secondary School Level in behavioural terms.

Unit 2: Methodology of Science Instructions

- 2.1 Problem-Solving Method
- 2.2 Demonstration Method.
- 2.3 Laboratory Method.
- 2.4 Inductive and Deductive Method.
- 2.5 Project Method.

Unit 3: Transaction of Science Instructions to Visually Impaired.

- 3.1 Problems of Learning / teaching Science with reference to Visually Impaired Children.
- 3.2 Specific teaching aids and their uses: Thermometer, Barometer, Lactometer, Stop Watch, Specimens, Bones, Plants, Animals, Models, Tactile Charts and Diagrams.
- 3.3 Preparation of Science Teaching aids.
- 3.4 Lesson Planning.
- 3.5 (a) Science Activities for Visually Impaired (SAVI)
(b) Teaching Science through museum, clubs, fairs, projects, nurseries, zoological/botanical parks and environment.
(c) Laboratory Science.

Unit 4: Curriculum Development

- 4.1 Concept of Curriculum and its Objectives.
- 4.2 Principles of Curriculum development.
- 4.3 Problem, procedures and factors affecting curriculum development.
- 4.4 Adaptations in Science curriculum for Visually Impaired.
- 4.5 Different approaches of Curriculum development in Science.

Unit 5: Evaluation

- 5.1 Concept of Evaluation and its functions.
- 5.2 Stating learning outcomes in Science in behavioural terms
- 5.3 Construction of different types of test-items for evaluation in Science.
- 5.4 Adaptations in evaluation for the Visually Impaired Children.
- 5.5 Diagnostic testing and remediation procedures.

Suggested Readings

- Brown, Robert. (1978). *Science instruction of visually impaired youth*. New York: American Foundation for the Blind.
- Fletcher, R.C. (1973). *Teaching of science and mathematics to the blind*. Worcester: Worcester College for the Blind.
- Gupta V.K. (1995). *Readings in science and mathematics education*. Ambala: The Associated Publishers.
- Gupta, S.K. (1983). *Technology of science education*. Delhi : Vikas Publishing House Pvt. Ltd.

- Gupta, V.K. (1995). *Teaching and learning of science and technology*. New Delhi: Vikas Publishing House Pvt. Ltd.
- NIVH. (1992). *Handbook for the teachers of the visually handicapped*. Dehradun: National Institute for the Visually Handicapped.
- Heanninen, K.A. (1975). *Teaching of visually handicapped*. Ohio: Charles E. Merrill Publishing Company.
- Holbrook, N.C. & Koenig, A.J. (Eds.). (2010). *Foundation of education*. New York: AFB.
- Layton, David. (1989). *Innovations in science and technology education*. New Delhi: Sterling Publishers.
- Mittal, S.R. (Ed.). (2004). *Shikshak prashikshan lekhmala*. Delhi: AICB.
- Mukhopadhyaya, S., Jangira, N.K., Mani, M.N.G., and Ray Choudhary, N. (1987). *Sourcebook for training teacher of visually handicapped*. Delhi: NCERT.
- UNESCO. (1973). *Source book for science teaching*. Paris: UNESCO.
- Sharma, R.C. & Shukla, C.S. (2002). *Modern science teaching*. New Delhi: Dhanpat Rai Publishing Company (P) Ltd.
- Starin, A & Sund, B. (1983). *Teaching science through discovery*. Ohio: Charles E. Merrill Publishing Company.

PAPER – X: PRACTICAL**Max Marks: 300****External: 225****Internal: 75****1- Braille**

Max Marks: 100

External: 75

Internal: 25

- (a) Mastery over Reading and Writing Standard English Braille.
- (b) Mastery over Reading and Writing Bharati Hindi Braille (Uncontracted), and familiarization with contracted Hindi Braille.
- (c) An introduction to mathematical and Science Braille Code.

2- Orientation and Mobility

Max Marks: 40

External: 30

Internal: 10

- (a) Proficiency in pre-cane skills.
- (b) Proficiency in sighted guide techniques.
- (c) Use of long cane for indoor and outdoor purposes.
- (d) Preparation and use of tactile and auditory maps for effective mobility.

3- Daily living skills and sensory training

Max Marks: 40

External: 30

Internal: 10

- (a) Preparation and uses of aids for training remaining senses.
- (b) Task analysis in Daily Living Skills (DLS).
- (c) Preparation and uses of aids for teaching Daily Living Skills.

4- Use of Aids, Appliances and Vision Screening Tests.

Max Marks: 60

External: 45

Internal: 15

(a) Use of Taylor Frame and Abacus.

(b) Use of Perkins Braille, Geometric and Mathematical Kit and Devices.

(c) Use of Vision Screening Test.

V Teaching Aids

Max Marks: 20

External: 15

Internal: 05

(a) Two aids for teaching different subjects to low vision or blind children/students.

VI Case Study

Max Marks: 40

External: 30

Internal: 10

(a) Two Case Studies.